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IDEA-0692-67
Copy 9 of 9

20 November 1967

MEMORANDUM FOR THE RECORD

SUBJECT: U-2C/U-2R Turning Performance

REFERENCE: [REDACTED]

1. A possible explanation for the relatively high turning rates demonstrated by [REDACTED] pilots (reference wire) flying the U-2C can be offered by comparing the weights of the [REDACTED] tests to the U-2C handbook maximum altitude versus fuel weight curve. Although the [REDACTED] tests were conducted at maximum altitude for a given fuel weight, these altitudes were consistently 2500-3000 feet below the maximum altitudes in the handbook.

2. It is a generally accepted fact that the U-2C, for some time, has been unable to fly at the handbook maximum altitudes for comparable fuel loads. Therefore, the U-2C flies at a lower lift coefficient than the handbook U-2C with a corresponding larger margin before the onset of buffet. As a comparison, the attached curve of U-2R estimated turning performance indicates that at a cruise Mach number of .72 and at an altitude approximately 3300 feet lower than a maximum power cruise altitude, the turning rate will be 2.1-2.3 deg/sec before buffet depending upon the gross weight.

3. It appears that there is, in fact, no discrepancy between the Lockheed estimates and the [REDACTED] results for the U-2C when the altitude effect is considered. The attached curve presents the estimated turning rates for the U-2R as a function of Mach number for various power settings and for gross weights which are representative of begin and end cruise weights.

USAF review(s) completed.

[REDACTED]
ASD/R&D/OSAAttachment -
As Noted[REDACTED]
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[REDACTED]

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ASD/R&D/OSA [REDACTED] bjg (20 Nov 67)
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